Amendments To The Claims:

Please amend the claims as shown. Applicants reserve the right to pursue any cancelled claims at a later date.

Page 23 line 1, delete the term "--Claim—" in it place add – What is Claimed is:--

1-22 (canceled)

23. (new) A method for determining the causes of failures in industrial processes, comprising:

at least one signal source for outputting a variable in the continuous process and producing a process variable signal;

a detecting device that receives the process variable signal from the signal source in the continuous process and indicates the time and/or location of the process variable signal; and

a correlating device that correlates the time and location process variable signal from the detecting device and correlates all the variable signals to detected the process variables and the time and location of a failure to determine the cause of the failure.

24. (new) The method according to claim 23, wherein the correlating devices determines the process variables signals that exhibit no significant correlation with the failure and excludes those process signals variables from the cause of the failure.

25. (new) The method according to claim 24 wherein the correlating devices perform the function of eliminating the process variables that are a consequence of the failure rather than a cause of the failure by comparing the time of the failure to the time of a particular process

variable.

26. (new) The method according to claim 25 wherein the correlating device continuously performs elimination routines to narrow down the process variable to determine which process variable is directly related to the failure to determine the location on the industrial process of the failure.

27. (new) The method according to claim 26 wherein the correlating device determines if a sub process in the industrial process is the location of the failure to determine the cause of the failure.

28. (new) The method according to claim 27 where in the correlating device determines if the cause of the failure is locate in the sub process and evaluates the sub process to determine the root cause of the failure.

29. (new) The method according to claim 23 wherein the correlation devices utilizes the time correlations to determine if a failure is a technical failure in the industrial process equipment.

30. (new) The method according claim 23, wherein the correlation devices utilizes the location correlations to determine if a failure is a technical failure in the industrial process equipment.

31. (new) The method according to claim 23 further comprising the steps of communicating using a communication device to a service provider the correlation and the service provider monitoring the correlation data to provide service in the event a failure occurs to the industrial process to correct the failure.

32. (new) A device for determining causes of failures in industrial processes, comprising;

a detection unit that detects process variables and the time and/or location of a failure,

an evaluation unit that determines correlations between the detected process variables and the time and/or location of the failure, and

an output unit that outputs the process variables correlating with the time and/or location of the failure.

33. (new) The device according to claim 32, wherein the detection unit consists of:

a) at least one measuring bus system that is part of a bus system or plurality of bus systems of an automation unit for controlling and/or regulating the industrial process,

b) at least one measuring head for detecting measuring signals, which is connected on the input side to a signal source of the industrial process that are already present and/or to be provided additionally and on the output side in a predefined form to the measuring bus system, and

c) one or a plurality of data concentrators, which are connected to the measuring bus system .

34. (new) A device according to claim 33 wherein the at least one measuring head is provided, which is connected on an input side to any bus system of the industrial process.

35. (new) A device according to claim 33 wherein the at least one measuring head is provided, which is connected on an output side directly to a data concentrator of the industrial process.

36. (new) A device according to claim 35, further comprising a communication unit that automatically sets up a line off communication between the data concentrators and measuring

heads.

37. (new) A device according to claim 33 wherein the measuring signals are time-stamped.

38. (new) A device according to claim 33 wherein the at least one measuring head is provided, which is connected to a signal source supplying a standard time signal.

39. (new) A device according to claim 33 wherein the data concentrators is further extended to accommodate any number of measuring bus systems and measuring heads.

40. (new) A device according to claim 33 further comprising at least one display unit to display the outputted process variables for viewing by an operator.